

Amendments to the Claims

Claims 1-16 (cancelled)

Claim 17 (original): An isolated nucleic acid comprising a nucleotide sequence selected from the group consisting of:

(i) the nucleotide sequence of SEQ ID NO:15, (ii) a degenerate variant of SEQ ID NO:15, (iii) the complement of (i) or (ii), (iv) a nucleotide sequence that encodes a polypeptide having the sequence of SEQ ID NO:16, (v) a nucleotide sequence that encodes a polypeptide having the sequence of SEQ ID NO:16 with conservative amino acid substitutions, and (vi) the complement of (iv) or (v).

Claims 18-29 (cancelled)

Claim 30 (original): An isolated polypeptide, said polypeptide comprising the amino acid sequence of SEQ ID NO:3, SEQ ID NO:10, or SEQ ID NO:16.

Claim 31 (cancelled)

Claim 32 (original): An antibody, said antibody selected from the group consisting of:

(i) antibodies capable of binding specifically to polypeptides comprising an amino acid sequence as provided in SEQ ID NO:7, and the binding of which can be competitively inhibited by a polypeptide the sequence of which is given in SEQ ID NO:7;

(ii) antibodies capable of binding specifically to polypeptides comprising an amino acid sequence as provided in SEQ ID NO:14, and the binding of which can be competitively inhibited by a polypeptide the sequence of which is given in SEQ ID NO:14; and

(iii) antibodies capable of binding specifically to polypeptides comprising an amino acid sequence as provided in SEQ ID NO:18, and the binding of which can be competitively inhibited by a polypeptide the amino acid sequence of which is given in SEQ ID NO:18.

Claim 33 (original): The antibody of claim 32, which antibody is detectably labeled.

Claim 34 (cancelled)

Claim 35 (original): A method of antenatal diagnosis of dysgenetic pregnancies, comprising:

quantifying levels of PAPP-E protein circulating in maternal serum during first or second trimester of pregnancy, and

comparing to a standard,

decreased levels of circulating PAPP-E as compared to standard indicating increased likelihood of a dysgenetic pregnancy.

Claim 36 (cancelled)

Claim 37 (new): An isolated nucleic acid comprising a nucleotide sequence selected from the group consisting of:

(i) the nucleotide sequence of SEQ ID NO:8; (ii) the nucleotide sequence of SEQ ID NO:9; (iii) a nucleotide sequence that is a degenerate variant of the nucleotide sequence of SEQ ID NO:9; (iv) a sequence of a polynucleotide that encodes a polypeptide with the amino acid sequence of SEQ ID NO:10; and (v) a nucleotide sequence that is the complete complement of the nucleotide sequence of any one of (i) – (iv).

Claim 38 (new): The isolated nucleic acid of claim 37, wherein said nucleic acid encodes a polypeptide having metalloproteinase activity.

Claim 39 (new): The isolated nucleic acid of claim 37, wherein said nucleic acid is expressed in placental tissue.

Claim 40 (new): The isolated nucleic acid of claim 37, further comprising at least one expression control element, wherein said polynucleotide is operably linked to said at least one expression control element.

Claim 41 (new): The isolated nucleic acid of claim 37, wherein said isolated nucleic acid is detectably labeled.

Claim 42 (new): The isolated nucleic acid of claim 37, wherein said isolated nucleic acid is attached to a substrate.

Claim 43 (new): A microarray wherein at least one probe of said microarray is a nucleic acid according to claim 37.

Claim 44 (new): A replicable vector comprising the isolated nucleic acid of claim 37.

Claim 45 (new): A replicable vector comprising the isolated nucleic acid of claim 40.

Claim 46 (new): An expression vector comprising the isolated nucleic acid of claim 37.

Claim 47 (new): A host cell transformed to contain the nucleic acid of claim 37, or the progeny thereof.

Claim 48 (new): A host cell transformed to contain the replicable vector of claim 44, or the progeny thereof.

Claim 49 (new): A host cell transformed to contain the replicable vector of claim 45, or the progeny thereof.

Claim 50 (new): A host cell transformed to contain the expression vector of claim 46, or the progeny thereof

Claim 51 (new): A pharmaceutical composition comprising: the polypeptide of claim 30;
and a pharmaceutically acceptable excipient.

Claim 52 (new): A pharmaceutical composition comprising: the antibody of claim 32;
and a pharmaceutically acceptable excipient.

Claim 53 (new): A pharmaceutical composition comprising: the nucleic acid of claim 17;
and a pharmaceutically acceptable excipient.